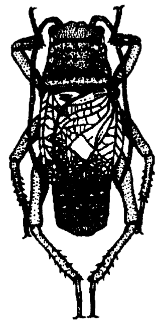
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NEW FOSSIL FAMILY OF THE ORDER GRYLLOBLATTIDA (INSECTA: PLECOPTEROIDEA) FROM ASIA

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New family Tunguskapteridae fam. n. of the order Grylloblattida is established. *Tunguskaptera eximia* gen. et sp. n. from Upper Permian of Siberia and *Ferganamadygenia plicata* gen. et sp. n. from Middle or Upper Triassic of Kirghizia are described.

KEY WORDS: Grylloblattida, new taxa, Permian, Triassic.

С.Ю.Стороженко,[1] П.Вршански.[2] **Новое ископаемое семейство отряда Grylloblattida (Insecta: Plecopteroidea) из Азии // Дальневосточный энтомолог. 1995. N 19. С. 1-4.**

Установлено новое семейство ископаемых гриллоблаттидовых Tunguskapteridae fam. n. Описаны *Tunguskaptera eximia* gen. et sp. n. из верхней перми Сибири и *Ferganamadygenia plicata* gen. et sp. n. из среднего или верхнего триаса Киргизии.

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INTRODUCTION

The order Grylloblattida (=Paraplecoptera) are known from Carboniferous to recent time by 37 families (Storozhenko, 1992a; 1992b; 1994). One new family is described below. The present paper is based on material deposited in the Paleontological Institute of Russian Academy of Sciences (Moscow).

Family TUNGUSKAPTERIDAE Storozhenko et Vršanský, fam. n.

DIAGNOSIS. Fore wing small or large, membranous, unicolorous, without hairs, with broadly rounded apex. The subcosta (Sc) terminating on the costa (C) about apical third of wing. Costal area sending off a series of simple veinlets, relatively narrow: maximal width of costal area 6.1-8.9 times less than width of wing. The radius (R) simple, extending well to the apex of wing; its sector (RS) arising in proximal third of wing, simple, directed towards the apex of wing. The base of media (M) is between R and CuA; M divided in a main anterior branch (MA) and a concaved and desclerotized near the middle main posterfior branch (MP). MA and MP free. The anterior cubitus (CuA) forked into two main branches: the auter one (CuA_1) simple or with 2 branches; CuA_2 always simple. The posterior cubitus (CuP) unbranched, concaved. The area between CuA and CuP narrow, but distinctly widened near the base, with simple or partly branched cross-veins. Anal area long, narow. The first anal vein (A_1) regularly pectinated, with 4-10 branches; A_2 with 2 branches or anastamosed with A_1. Cross-veins mostly straight and simple; sometimes forming a double row of cells in radial area and areas between MA, MP, CuA_1 and CuA_2. Oblique vein (M_5) between the base of M and CuA distinct. Head elongate, narrower than pronotum, with large eyes and 3 ocelli. Pronotum transverse, with broad lateral lobes (paranota). Fore femur and tibia without spines and spurs. Hind wing and abdomen unknown.

RELATIONS. New family resembles Mesozoic Geinitziidae in having distinct M_5 in fore wing (in this respect both families well distinguished from all other grylloblattids), but differs by simple R and RS and by very narrow area between CuA and CuP (in Geinitziidae R with 2-5 branches directed to anterior margin of wing; RS with 2-6 branches; area between CuA and CuP relatively broad).

GENERA INCLUDED. *Tunguskaptera* gen. n. from Upper Permian of West Siberia and *Ferganamadygenia* gen. n. from Middle or Upper Triassic of Kirghizia.

Genus *Tunguskaptera* Storozhenko et Vršanský, gen. n.

Type species: *Tunguskaptera eximia* Storozhenko et Vršanský, sp. n.

DIAGNOSIS. Fore wing large. Width of radial area 1.6 times more than width of costal area. Cross-veins in radial area forming a double row of cells. M_5 anastamosed with CuA. CuA_1 with fork. A_1 with 10 branches. A_2 not anastamosed with A_1.

SPECIES INCLUDED. One new species from Upper Permian of Siberia.

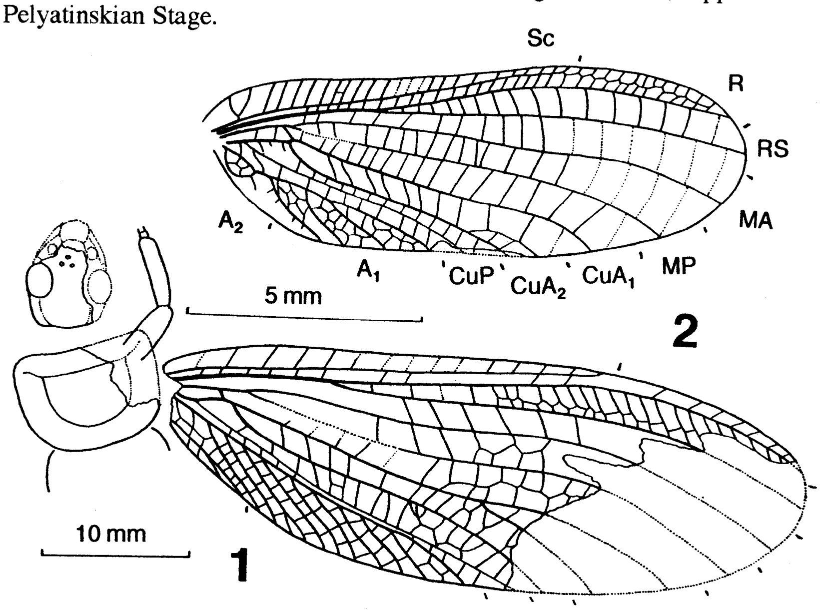
***Tunguskaptera eximia* Storozhenko et Vršanský, sp. n.**

Fig. 1

MATERIAL. Holotype - Imprint and counter-imprint of fore wing, head and pronotum, specimen N 1075/1; Russia: West Siberia, left bank of Nizhnaya Tunguska River near Bugarikhtinskaya shtolnya; Upper Permian, Pelyatinskian Stage; in collection of Paleontological Institute, Moscow.

DESCRIPTION. Distal parts of areas between MA, MP, CuA and CuP with two rows of cells. Length of fore wing 46.8 mm, width of fore wing 16.0 mm, width of pronotum 10 mm, length of pronotum 6.0 mm.

LOCALITY AND HORIZON. Russia, Tunguska River; Upper Permian, Pelyatinskian Stage.



Figs. 1-2. Tunguskopteridae fam. n. - 1) *Tunguskaptera eximia* sp. n., holotype, spec. N 1075/1; 2) *Ferganamadygenia plicata* sp. n., holotype, spec. N 2555/717. Explanations of veins see in text.

Genus *Ferganamadygenia* Storozhenko et Vršanský, gen. n.

Type species: *Ferganamadygenia plicata* Storozhenko et Vršanský, sp. n.

DIAGNOSIS. Fore wing small. Width of radial area equal to width of costal area. Cross-veins in radial area unbranched, straight. CuA_1 simple. M_5 anastamosed with CuA_1. A_1 with 4 brances, anastamosed with A_2.

RELATIONS. Closely related to *Tunguskaptera* gen. n., but differing by simple cross-veins in radial area, simple CuA_1 and A_1 with 4 branches.

SPECIES INCLUDED. One new species from Middle or Upper Triassic of Kirghizia.

***Ferganamadygenia plicata* Storozhenko et Vršanský, sp. n.**

Fig. 2

MATERIAL. Holotype - Imprint and counter-imprint of fore wing, specimen N 2555/717; Kirghizia: Orshskaya oblast, 30 km W from Shurab, Madygen; Middle or Upper Triassic, Madygenian Stage; in collection of Paleontological Institute, Moscow.

DESCRIPTION. Distal parts of areas between MA, MP, CuA and CuP with simple cross-veins. Length of fore wing 11.5 mm, width of fore wing 4.0 mm.

LOCALITY AND HORIZON. Kirghizia, Madygen; Middle or Upper Triassic, Madygenian Stage.

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